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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,526	08/30/2005	Manoranjan Misra	40-02	8889
23713 7590 08/21/2007 GREENLEE WINNER AND SULLIVAN P C 4875 PEARL EAST CIRCLE SUITE 200 BOULDER, CO 80301			EXAMINER HRUSKOCI, PETER A	
			ART UNIT 1724	PAPER NUMBER
			MAIL DATE 08/21/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/510,526

Applicant(s)

MISRA ET AL.

Examiner

Peter A. Hruskoci

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 31-34 and 36-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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Claims 4, 6-8, 15, and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 4, 6-8, 15, and 29 "DE" is vague and indefinite because it is unclear how this term further limits the claims.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Misra et al. 6,197,201 in view of JP publication 2001340873A Miyama. Misra et al. disclose (see col. 4 line 4 through col. 6 line 42, and col. 11 lines 18-37) a method for removing arsenic from arsenic containing water substantially as claimed. The claims differ from Misra et al. by reciting that the composition comprises a metal salt hydroxide-gel. It is submitted that the composition formed in the water of Misra et al. appears to include a gelatinous precipitate of lanthanum and ferric hydroxides, which is considered indistinguishable from the recited metal salt hydroxide-gel. Miyama disclose (see Abstract) that it is known in the art to utilize a gel-like material in which an iron hydroxide precipitate is fixed, to aid in removing arsenic from water. It would have been obvious to one skilled in the art to modify the method of Misra et al. by utilizing the recited composition in view of the teachings of Miyama, to aid in removing arsenic from water.

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Claims 4, 5, 8, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Misra et al. 6,197,201 in view of JP publication 2001340873A Miyama as above, and further in view of Wang et al. 5,064,531. The claims differ from the references as applied above by reciting the use of a DE coated filter, or a diatomaceous earth filter. Wang et al. disclose (see col. 2 line 50 through col. 3 line 26) that it is known in the art to utilize a diatomaceous earth filter to aid in removing contaminants from water. It would have been obvious to one skilled in the art to modify the references as applied above, by utilizing the recited filters in view of the teachings of Wang et al., to aid in separating water from the composition.

Claims 6, 7, 15-23, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Misra et al. 6,197,201 in view of JP publication 2001340873A Miyama and Wang et al. as above, and further in view of Mills 5,683,953. The claims differ from the references as applied above by reciting the use of a DE filter bed, or DE coated hydroxide gels. Mills disclose (see col. 4 line 56 through col. 8 line 28) that it is known in the art to utilize a diatomaceous earth filter bed, and a composition including diatomaceous earth, aluminum hydroxide, and lanthanum chloride, to aid in filtering water, and in removing contaminants such as dissolved phosphate from water. It would have been obvious to one skilled in the art to modify the method the references as applied above by utilizing the recited filter bed and composition in view of the teachings of Mills, to aid in filtering water, and in separating dissolved contaminants from the water. The specific concentration, contact time, pH, and weight ratios utilized, would have been an obvious matter of process optimization to one skilled in the art, depending on the specific water treated and results desired, absent a sufficient showing of unexpected results.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over

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Farrah 5,432,077 in view of JP publication 2001340873A Miyama. Farrah disclose (see col. 3 line 52 through col. 5 line 48) a method for removing heavy metals from heavy metal-containing solution substantially as claimed. The claim differ from Farrah by reciting that the solution is contacted with a metal salt hydroxide-gel. It is submitted that the adsorptive material utilized in Farrah appears to include ferric and aluminum hydroxides which are considered to be indistinguishable from the recited metal salt hydroxide-gel. Miyama disclose (see Abstract) that it is known in the art to utilize a gel-like material in which an iron hydroxide precipitate is fixed, to aid in removing heavy metals from water. It would have been obvious to one skilled in the art to modify the method of Farrah by utilizing the recited composition in view of the teachings of Miyama, to aid in removing heavy metals from water.

Claims 28 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farrah in view of JP publication 2001340873A Miyama as above, and further in view of Misra et al. 6,197,201. It is noted that Farrah disclose the use of a diatomaceous earth adsorbent material. The claims differ from the references as applied above, by reciting that the metal salt hydroxide-gel comprises lanthanum and iron. Misra et al. disclose (see col. 4 line 4 through col. 6 line 42, and col. 11 lines 18-37) that it is known in the art to utilize a gelatinous precipitate of lanthanum and ferric hydroxides, to aid in removing arsenic and selenium for water. It would have been obvious to one skilled in the art to modify the references as applied above, by utilizing the recited metal salt hydroxide-gel in view of the teachings of Misra et al., to aid in removing heavy metals from water.

Claims 29 and 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrah in view of JP publication 2001340873A Miyama as above, and further in view of Mills

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5,683,953. The claim differs from the references as applied above by reciting the use of a specific DE filter bed. Mills disclose (see col. 4 line 56 through col. 8 line 28) that it is known in the art to utilize a diatomaceous earth filter bed, to aid in filtering water, and in removing contaminants such as dissolved phosphate from water. It would have been obvious to one skilled in the art to modify the references as applied above, by utilizing the recited filter bed in view of the teachings of Mills, to aid in filtering water, and in separating dissolved contaminants from the water.

Applicant's election with traverse of Group I, Claims 1-30 and 35 is acknowledged. The traversal is on the ground the Groups all relate to the concept of removing arsenic from arsenic-containing water using a precipitating composition, and a search for all groups would not be burdensome on the Office. This is not found persuasive because the claims were restricted under PCT Rule 13.2. It is submitted that the claims of Groups I-III share a precipitating composition as the special technical feature, which is considered to lack novelty or an inventive step in view of Farrah 5,432,077 (see col. 3 line 52 through col. 5 line 48). Furthermore, a serious burden on the Examiner may be prima facie shown by either separate classification, separate status in the art, or different fields of search. The methods of Group I and III have a separate classification and status in the art, and would require a different field of search from the composition of Group II. The method claims of Groups I and III would require the examination of different issues of patentability from the composition claims of Group II.

The requirement is still deemed proper and is therefore made final.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter A. Hruskoci whose telephone number is (571) 272-1160.

The examiner can normally be reached on Monday through Friday from 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Peter A. Hruskoci
Primary Examiner
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8/14/07